USER'S MANUAL FOR THE RACT/BACT/LAER CLEARINGHOUSE (RBLC) STANDALONE EDITOR

CLEAN AIR TECHNOLOGY CENTER

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PREFACE

This user's manual was prepared for and funded by the RACT/BACT/LAER Clearinghouse (RBLC),[1] U.S. Environmental Protection Agency (EPA). The RBLC has been established and is maintained by the Clean Air Technology Center (CATC) to assist State and local air pollution control personnel in making control technology determinations and in sharing technology information.

The RBLC provides data on prevention and control technology determinations made primarily by State and local permitting agencies. The Clearinghouse contains over 4,000 determinations that can help the user to identify appropriate technologies to mitigate or treat most air pollutant emission streams. The RBLC was designed to help permit applicants and reviewers make pollution prevention and control technology decisions for stationary air pollution sources and includes data submitted by 50 states and territories in the U.S. on over 200 different air pollutants and 1,000 industrial processes.

The RBLC Standalone Editor allows users who cannot access the RBLC Web Site to enter new data into a standalone program and then send the data to the EPA for inclusion in the RBLC Web Site.

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[1] NOTE: RACT, BACT and LAER are acronyms for different Clean Air Act program requirements combined to create the name "RACT/BACT/ LAER Clearinghouse." RACT, or Reasonably Available Control Technology, is required on existing sources in areas that are not meeting national ambient air quality standards (i.e., non-attainment areas). BACT, or Best Available Control Technology, is required on major new or modified sources in "clean" areas (i.e., attainment areas). LAER, or Lowest Achievable Emission Rate, is required on major new or modified sources in non-attainment areas. However, data in the Clearinghouse is not limited just to sources subject to these requirements. Noteworthy prevention and control technology decisions are included in the RBLC even if they are not related to RACT, BACT, or LAER decisions.

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5.5 STANDALONE EDITOR

5.5.1 INSTALLATION

The RBLC Standalone Editor is an independently executable program without any special software licenses. The Editor runs on an IBM compatible desktop computer with the following minimum requirements:

- Intel Pentium 90MHz or equivalent with 32MB RAM
- Microsoft Windows 95, 98, NT, 2000, XP, or ME software environments

PLEASE NOTE: If you have previously installed the RBLC Standalone Editor and have downloaded a new version for upgrade purposes, you MUST finalize all of your current determinations, generate an upload file, and uninstall the previous version before executing the setup program for the new Editor version. If you do not follow this procedure you WILL lose data and the new version may not function properly.

To install the Editor, download the Zip file from the RBLC web site. Then, do the following:

1. Un-compress the download file into a temporary directory on your PC. (PKZip or WinZip is required for this operation.)
2. Find SETUP.EXE in the directory.
3. Run SETUP.EXE and follow its directions.

After following the program's installation procedure, the program is ready to use.

To uninstall the program,

1. Press the Windows System Tray Start Button.
2. Go to Settings and click on Control Panel.
3. Double-click on Add/Remove Programs.
4. Click on Install/Uninstall Tab.
5. Find RBLC Editor in list of installed programs and select it.
6. Press Add/Remove Button.
7. Program is now being removed from the PC.
8. Press OK Button to return to Control Panel.
9. Press File/Close to exit from Control Panel. The Upload Files and Archive Files sub-directories and any files located in them will remain after the uninstall process. If you wish to remove them from your system, they must be removed manually. If you intend to reinstall the Editor with a new version, these files can remain and will not be affected.

5.5.2 STARTING THE PROGRAM

1. Press the Windows System Tray Start Button.
2. Locate and click on RBLC Standalone Editor shortcut in the Windows Menus.

Notes:

- The first time the Editor is started, a fresh database is created for storage of new determinations. After creating the new database, the program displays "No existing program database found, created new database" in a message box. Press the OK button to continue.

5.5.3 USING THE PROGRAM

After starting the editor program, the main menu displays the following operations:

- **Add Determination** (add a new determination to the Editor)
- **Edit Determination** (modify an existing determination in the Editor)
- **Get Help** (get help on how to use the Editor)
- **Delete Determination** (delete an existing determination in the Editor)
- **Create Upload File** (create a file containing the Editor's data for EPA)
- **Preview/Print Report** (view or print a list of determination data)
- **Exit** (quit Editor and return to Windows)

During editor usage, moving the mouse pointer over items in the editor window displays help near the item. Clicking on the Help button near the top of each window opens the Editor's Help System.

For keyboard users:

- Use the Tab key to move from one box or button to another.
- To select a button utilizing the underlined letter, simultaneously press the Alt key & the underlined letter key
- In pull-down list boxes, use the F4 key to see items and the down arrow to select an item.

5.5.3.1 USING THE EDITOR'S HELP SYSTEM

The Editor's Help System can be accessed either from the Main Menu by pressing the Get Help button or from any of the Editor windows by pressing the Help button near the top of the window.

When the help system is activated, either the full help document may be read by scrolling down the displayed document, or specific information may be found by entering the text in the Enter Find Text box and pressing the Find button. Repeatedly pressing the Find button acts as a Find Next button and cycles through the document. Use the Print button to print all or part of the help information. To quit using the Help System, press the Quit button.

5.5.3.2 ADD A NEW DETERMINATION

To add a new determination to the Editor:

1. Go to the Editor's main menu.
2. Press the Add Determination button.
3. In the Select Criteria For Add window, select the state abbreviation (2- characters) where the Facility is located from the State pull-down box.
4. Press the ADD Facility button to create a new determination form to enter data or the Cancel button to return to the main menu. (For more information on adding data to this form, please go to Section 5.5.3.4, titled "Edit An Existing Determination.")

5.5.3.3 DELETE AN EXISTING DETERMINATION

To delete a determination from the Editor:

1. Go to the Editor's main menu.
2. Press the Delete Determination button.
3. In the Select Criteria For Delete window, select the existing Plant Facility (State, RBLC-ID, Plant Facility) to be deleted from the pull-down list box.
4. Press the DELETE Facility button to delete it or the Cancel button to return to the main menu.

5.5.3.4 EDIT AN EXISTING DETERMINATION

A determination has three parts: a Facility section, a Process section, and a Pollutant section.

To start editing a determination:

1. Go to the Editor's main menu.
2. Press the Edit Determination button.
3. In the Select Criteria For Edit window, select existing Plant Facility (State, RBLC-ID, Plant Facility) to be edited from the pull-down list box.
4. Press the EDIT Facility button to edit it or the Cancel button to return to the main menu.

-- Edit Facility Section --

In Facility section, add or edit data in following text boxes or pull-down list boxes:

- Add the Company Name.
- Add the Plant Name.
- Fill in the Plant Contact Name, Telephone, and E-mail Address.
- Add the Contact Street Address.
- Add the Contact City.
- Add the Contact Zip or Postal Code.
- Enter the Plant County (physical location).
- Select the Plant Region (use region pull-down box to select the Region Number).
- Enter the Plant Location UTM (Universal Transverse Mercator) Grid Zone Number.
- Enter the Plant Location UTM East Coordinates Number.
- Enter the Plant Location UTM North Coordinates Number.
- Select Yes or No from the pull-down box as to whether a public hearing was held.
- The Entered Date box shows the date the determination was created. (auto-assigned)
- The Updated Date box shows the date the determination was last modified. (auto-assigned)
- Select the Issuing Agency (State-Code, Agency Name) from the pull-down box. (If "NOT FOUND" is selected, enter the Agency name in the Facility Notes box.)
- Select the Agency Contact (State, Name) from the pull-down box. (If "NOT FOUND" is selected, enter the contact's name and phone number in the Facility Notes box.)
- Select the Construction Type (New/Modification) from New/Mod pull-down list box.
- Enter the Issuing Agency Permit Number in Permit/File # box.
- Enter the EPA AIRS ID Number in Universal Plant ID box.
- Select the SIC (Standard Industrial Classification) code from SIC pull-down list box.
- Enter NAICS (North American Industrial Classification System) code(s) in the NAICS box.
- For the Estimated/Actual Dates area:
  - Application Received (APPL RCVD) - Start-Up (START-UP)

- Permit Issued (PERMIT ISSUE) - Compliance Verified (COMPL VERIFY)
    1. Select (Estimated or Actual) Date from pull-down box.
    2. Press the Date button to enter the date into the pop-up window:
        - Use Month, Day, and Year pull-downs to set the date.
        - Press the Enter button to enter the date, the No Date button to clear a date, or the X button (Alt-F4) to cancel.

- Enter any explanatory information about the determination in the Facility Notes box.
- Enter a description of the plant and its emissions in the Plant Narrative box.
- Enter a description of the plant's emission sources in the Emission Sources box.
- List the fuels used at the plant in the Fuel box.
- Describe the methods used to reduce the plant's emissions in the Abatement Description box.

- Enter any Affected Boundaries information (sensitive areas affected by the plant's pollutants) by pressing the Add/Edit Affected Boundaries button:
    - To add an affected boundary to the table:
        1. Select a boundary from the Boundary pull-down list box
        2. Enter the distance of your plant from the Boundary (kilometers) in the Distance box.
        3. Press the Add button to add the data to the table.
    - To delete boundary from the table:
        1. Select boundary from the Boundary pull-down list box.
        2. Press the Delete button to delete it.

    When using the Add or Delete buttons in the table, the data change is saved automatically. Press the Done button to go back to the previous window.
- Enter any Plantwide Emissions information (pollutants emitted by the plant) by pressing the Add/Edit Plantwide Emissions button:
    - To add a pollutant to the table:
        1. Select a pollutant from the Pollutant pull-down list box.
        2. Enter the Emissions Rate After Control/Prevention (in T/YR) in the box.
        3. Press the Add button to add the data to the table.
    - To delete a pollutant from the table:
        1. Select a pollutant from the Pollutant pull-down list box.
        2. Press the Delete button to delete it.

    When using the Add or Delete buttons in the table, the data change is saved automatically. Press the Done button to go back to the previous window.

After editing the data, use one of the following buttons to continue:

- Back (ask to save data and return to previous window).
- Go To Main Menu (ask to save data and then go to main menu).
- Go To Process List (save data and go to Process section).

- Save (save data).

-- Edit Process Section --

When entering the Process section, use the initial Process selection window to either:

- Edit an existing process by first selecting one from the Existing Process pull-down list box and then pressing the Edit button to edit it.
- Add a new process by pressing the Add New button. After pressing this button, the Process section window is displayed. Enter the desired name and then continue to add information to this window.
- Go back to the previous window by pressing the Cancel button.
- Go to the main menu by pressing the Go To Main Menu button.

Add or edit Process section data by using the following text boxes or pull-down list boxes:

- Enter the name of the process involved in the permitting decision in the Process box.
- Select the type of process that produces the emissions from the Process Type pull-down.
- List the EPA Source Classification Code (SCC) in the SCC Code box.
- Enter the primary fuel used by this process in the Primary Fuel box.
- Enter a value for the throughput/capacity of the process unit in the Throughput box.
- Enter the throughput/capacity units used for the process in the Throughput Units box.
- Using Y/N (Yes/No) pull-downs, answer the questions as to How Compliance Has Been Verified. If the compliance verification option is “Other,” enter the compliance description in the Describe Other box.
- Enter any notes about the process or its compliance in the Process/Compliance Notes box.

After editing the data, use one of the following buttons to continue:

- To Process List (ask to save data and return to the Process List window).
- Add Another (save and add another new process).
- Go To Main Menu (ask to save data and then go to the main menu).
- Go To Pollutant List (save data and go to the Pollutant section).
- Save (save data).
- Delete Current Process (delete the displayed process).

-- Edit Pollutant Section --

When entering the Pollutant section, use the initial pollutant selection window to either:

- Edit an existing pollutant by first selecting one from the Existing Pollutant pull-down list box and then pressing the Edit button to edit it.
- Add a new pollutant by pressing the Add New button. After pressing this button, select the new pollutant from the Pollutant pull-down list box and press the Add button to add it.
- Go to the Process List by pressing the To Process List button.
- Go back to the previous window by pressing the Cancel button.
- Go to the main menu by pressing the Go To Main Menu button.

Add or edit the Pollutant section data by using the following text boxes or pull-down list boxes:

- Select the method used to achieve emission limit from the Poll Reduction Method pull-down.
- Enter a description of the pollution prevention and/or add-on control equipment used in the Poll.Prevent./Add-on Description box.
- Enter the number of control options considered for this pollutant in the Number Of Control Options Considered box.
- Enter the rank (number indicating rank order of options from most to least effective) of the option selected in the Rank Of Option Selected box.
- In the Emission Limit 1 box, enter a value for the primary emission limit listed in the permit.
- In the Emission Limit 1 Unit box, enter the units for the limit (e.g., LB/MMBTU).
- In the Emission Limit 1 Other Conditions box, enter details about the emission limit.
- In the Emission Limit 2 box, enter a value for the alternative emission (if on permit).
- In the Emission Limit 2 Unit box, enter the units for the limit (e.g., LB/MMBTU).
- In the Emission Limit 2 Other Conditions box, enter details about the emission limit.
- In the Standardized Limit box, enter a value for the RBLC Standardized emission limit (if required, see Appendix E).
- In the Standardized Unit box, enter the units for the limit (e.g., LB/MMBTU).
- In the Standardized Other Conditions box, enter details about the emission limit.
- Select the regulatory program on which the emission limit was based from the Basis pull-down.
- Enter the expected efficiency of control in the % Efficiency box (do not include the % sign). (The number entered is displayed as ###.#####, e.g., 98.75 becomes 98.75000.)
- Select the type of the emission source from the Emission Type pull-down.
- Select if costs have been verified (Y/N) from the Costs Verified By Agency pull-down..
- Enter the capital cost (dollars) of control equipment in the Cap Cost Of Control Equip box.
- Enter the annual operation and maintenance cost (dollars) of the control equipment in the O/M Cost Of Control Equip box.

- Enter the year (e.g., 2001) of dollar used in cost calculations in the Year Used In Cost Estimates box.
- Enter the annualized cost of the equipment (dollars) in the Annualized Cost box.
- Enter the cost effectiveness (dollars) in the Cost Effectiveness $/Ton box.
- Enter the incremental cost effectiveness (dollars) in Incremental Cost Effectiveness $/Ton box.

After editing the data, use one of the following buttons to continue:

- To Pollutant List (ask to save data and return to Pollutant List window).
- Add Another (add another new pollutant).
- Go to the Process List by pressing the To Process List button.
- Go To Main Menu (ask to save data and then go to the main menu).
- Save (save data).
- Delete Current Pollutant (deletes pollutant that is currently displayed).

5.5.3.5 CREATING AN EDITOR UPLOAD FILE

In order to submit your determination data to the Clearinghouse, you must create an upload file.

The first time that you prepare an upload file to send to the RBLC, the software creates two folders: an upload folder and an archive folder. The determinations that you select to send to the RBLC are removed from the working data base when the upload file is created. This is necessary to keep duplicates from being uploaded to the Online RBLC. A copy of the upload file is placed in the upload folder, and a copy of the entire working data base is placed in the archive folder. To send your entries to the RBLC via E-mail or on a floppy disk, you must go to the upload folder and select the file you want to send to the RBLC and attach it to your E-mail or copy it to a floppy disk. Copies of your submittal will remain in both the upload and archive folders. In fact, both of these folders will remain even if you un-install the program; however, you can manually delete them.

When the Editor Upload File is created, the following activities are performed:

- The existing working database is copied to the Archive Files sub-directory. This copy will contain all of your determinations. This archive copy will not be modified.
- The Editor Upload File is created based upon determinations you have selected for upload. This file is named based on the following scheme: "mmddyyRBLChhmmssB.mdb," where mmddyy is the current date (e.g., 12/11/2001 is 121101), hhmmss is the current 24-hour time (i.e., 18:35:24 is 183524), and B is the database revision level. The upload file, now present

in the Upload Files sub-directory, is an MS Access 97 Data base file containing only "NSR_..." Tables.
- The selected determinations are removed from the working data base.

Please note that your archived determinations are safe and can be retrieved. Please contact the CATC at (919) 541-0800 for assistance if this becomes necessary.

To create an Editor Upload File:

1. Go to the Editor's main menu.
2. Press the Create Upload File button.
3. In the Create Upload File window, first read the Create Upload File instructions and then either press the Next button to continue to the Select Facilities window or the Cancel button to return to the main menu.
4. The Select Facilities window will open. The box on the left side of the window displays a list of the determinations currently in your working data base. Click on a determination to select it. The box on the right side of the window will contain determinations you select for upload. The Details box at the bottom of the window displays facility information for a selected determination for verification purposes.
5. After selecting a determination, click the ">" button to move the determination from the Available determinations box to the Selected Determination box. To move them all at once, click the ">>" button.
6. Use the "<" and "<<" as described in step 5 to move determinations from the Selected box to the Available box.
7. Click the Create Upload File button once you have completed the selection process or the Go to Main Menu button to return to the main menu.
8. Note the location of the file in the file creation confirmation dialog box and click the OK button to continue to the main menu.

5.5.3.6 PREVIEW OR PRINT A DETERMINATIONS REPORT

The RBLC Editor allows you to view or print a "Freeform" determination report containing all determinations in your working data base. To view or print the Determination Report:

1. Go to the Editor's main menu.
2. Press the Preview/Print Report button.
3. In the Preview/Print Report window, use the scroll bars to view the report or press the Print button to print the report. Use the Quit button to return to the main menu.

5.5.4 SENDING AN EDITOR UPLOAD FILE TO EPA

Periodically, the Upload File (determinations) should be sent to the RBLC System Administrator for review and inclusion in the RBLC Web Site.

E-mail the Upload File by attaching it to an E-mail message addressed to the CATC at E-mail address:

catcmail@epa.gov

Be sure to include the sender's name, mailing address, and phone number in body of the message, in case there are any questions about the submittal.

If E-mail is not available, then copy the Upload File to a diskette and mail it to:

RBLC
MD-E143-03
U.S. Environmental Protection Agency
Research Triangle Park, NC 27711

Be sure to include the sender's name, mailing address, and phone number with the disk, in case there are any questions about the submittal.

When the Upload File is received at EPA, the RBLC System Administrator reviews it to make certain that all of the data files are there. Then, the determination is assigned a permanent RBLC ID and added to the website. The sender is notified via mail that the determinations are on-line, what the RBLC IDs are, and any deficiencies in the submittal. The RBLC Web Site's Edit option can be used to correct any of the problems.

5.5.5 PLANNING AND PREPARATION

Agencies may wish to define procedures and quality standards for entry of determination data to the RBLC. Incomplete or incorrect data can result in repeated calls to the submitting agency for more information or to misunderstandings about the data. In some cases, appointing one person to coordinate a large data entry effort and to be the EPA contact point may be a logical approach. In other cases, defining specific procedures and tracking the progress of entries may be more than adequate. In all cases, quality assurance and quality control (QA/QC) standards should be maintained. See Section 5.5.6 for a suggested QA/QC checklist.

Data entry and edits man be done most efficiently when the RBLC web data requirements and data fields are understood and the permit information has been organized before beginning entry. It is recommended that the permit information be organized before entry, so that all of the required information (e.g., codes, units, and abbreviations) will be on hand during data entry.

Refer to Section 5.5.6 of this document for:

- Descriptions of data fields;
- Required data fields, units, and formats; and
- Data organization tips.

Keep in mind that the permit information needs to be entered in such a way that the data base search routines will be able to find it when it is relevant. Take the time to accurately match RBLC process type codes and Source Classification Codes (SCCs) to the processes, and to describe control devices or pollution prevention technology. Identify processes and pollutants for which standard emission limits are required. The RBLC Reference Library, accessed from the RBLC Web Main page, contains a link to EPA's CHIEF web site. CHEIF maintains text and data base files containing the North American Industry Classification System (NAICS) Codes, Source Industrial Classification (SIC) Codes, and the SCCs needed to accurately categorize facilities and processes.[2] See Appendix E for a list of all processes with standardized emission limits.

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[2] The U.S Census Bureau maintains a Web site which cross references SIC codes with the North American Industry Classification System (NAICS) of industrial codes: http://www.census.gov/epcd/www/naics.html. The EPA's Emission Factor and Inventory Group maintains the list of SCCs and any updates of those codes can be found at: http://www.epa.gov/ttn/chief/codes/index.html.

At a more general level, identify the information needed to enter a complete determination. A determination must have information at the facility, process, and pollutant levels. Identify all likely pollutants for a process and be prepared to address them all, either as pollutant entries or explanatory notes in the process entry. Identify situations where a single process or piece of equipment may need to be entered as multiple process entries or several processes may need to be combined (see the examples below). When questions arise about how to enter non-standard situations, please contact the RBLC Webmaster.

EXAMPLE - ONE PROCESS, MANY EMISSION LIMITS

Problem: Separate emission limits for NO_x emissions have been set for multiple operation scenarios for turbines at a power plant. There are six operation scenarios based on three different fuel options and whether the turbines operate as simple or combined cycle. Emission limits for other pollutants are the same regardless of the scenario.

Solution: Enter the scenarios as six separate processes (process type codes and SCCs change for each scenario), and enter the NO_x emissions limits for each. Create a seventh process for the generic process (mixed fuels, and simple or combined cycles undefined), and enter the remaining pollutant limits under the seventh process. Document and explain this approach in the facility and process notes.

EXAMPLE - MANY IDENTICAL PROCESSES, ONE SET OF EMISSION LIMITS

Problem: Eight identical natural gas fueled turbines, vented through a single stack, are permitted together with identical emission limits. Emission limits are expressed in units of pounds per hour for each turbine, and parts per million exiting from the stack. How should the turbines' emission limits be entered in the RBLC?

Solution: Enter all eight turbines as a single process. Specify in the process notes the number of turbines and whether the throughput is the combined throughput or throughput for each turbine. Enter the emission limits, remembering to enter the parts per million emission limit in the standard emission limit fields. Specify in the notes field that the pounds per hour emission limit is for each individual turbine.

5.5.6 DATA FIELDS AND FORMATS

For a determination to be considered complete and eligible for promotion to the permanent RBLC data base, certain data fields must be entered, and required data formats must be observed. Data for many of the searchable fields must be entered before a screen can be saved. In the on-line data entry forms, the required fields are marked with a diamond (—).

Use Table 5.1 to identify required and recommended data fields. These requirements help insure that searches will be productive and that the data base contains information that is helpful to most users. Data elements marked as recommended fields are those that may be required under future NSR regulations. Collecting and entering these data will improve the quality and usefulness of the data base.

Refer to Appendix A and the on-line documentation for instructions for entries to each data field. As discussed previously, planning and organizing the data beforehand will make the data entry process more efficient. Figure 5.1 is a suggested QA/QC checklist for entries.

After a determination has been entered into the system, EPA will review the entry, follow up with the agency if necessary, and then promote the completed entry from Draft to Final.

TABLE 5.1
NAMES AND CHARACTERISTICS OF RBLC DATA FIELDS

FIELD NAME	REQUIRED; RECOMMENDED; OR NOT REQUIRED	USED FOR QUERIES	NOTES
FACILITY LEVEL INFORMATION			
RBLC ID	Required	Y	Assigned by the system. Unique to each determination.
Company Name	Not required	Y	Name of the parent company, if applicable
Plant/Company name	Required	Y	Name of the facility
Plant contact name	Recommended	N	
Plant contact's street address	Recommended	N	Plant Contact's mailing address, may not be facility address. Zip codes can be found at: http://www.usps.gov/ncsc/lookups/lookups.htm.
Plant contact's city, state and zip code	Recommended	N	
Plant contact's telephone/fax	Recommended	N	
Plant contact's email address	Recommended	N	
Plant location - UTM coordinates	Recommended	N	Actual plant location
Plant location - County	Not required	N	
Plant location - State	Required	Y	Assigned by the system.

FIELD NAME	REQUIRED; RECOMMENDED; OR NOT REQUIRED	USED FOR QUERIES	NOTES
EPA Region	Required	Y	Choose from a drop-down list.
Agency Code and Name	Required	Y	Choose from a drop-down list.
Agency Contact and Telephone Number	Required	N	Choose from a drop-down list.
Public Hearing	Not Required	N	
New/Modified Source	Required	N	
Permit Number	Required	Y	
AIRS Facility Number (universal Plant ID)	Recommended	Y	
NAICS Code	Recommended	Y	Complete list on CHIEF web site
SIC Code	Required	Y	Drop down list; complete list on CHIEF web site
Application Received	Recommended	N	
Permit Issue Date	Required	Y	Must be actual date in order for the determination to be promoted to the Final data base.
Start-up Date	Recommended	N	
Compliance Verification Date	Recommended	N	
Facility Notes	Recommended	N	Notes allow the entry of non-standard information.

FIELD NAME	REQUIRED; RECOMMENDED; OR NOT REQUIRED	USED FOR QUERIES	NOTES
Affected Class 1 Areas	Recommended	Y	
Plant Narrative/Emission Sources/Fuel/Abatement Description	Recommended	N	
Plantwide Emissions	Recommended	Y	
PROCESS LEVEL INFORMATION			
Process Description	Required	Y	
Process Type	Required	Y	Includes process type code, selected from a drop-down list. Also listed in Appendix D of this User's Manual.
Source Category Code (SCC)	Required	Y	A listing of SCCs can be found on the RBLC Documents page.
Primary Fuel	Recommended	N	For combustion units only
Throughput Capacity and Units	Not Required	N	If this information is CBI, it should **not** be entered.
Compliance Verification	Recommended	N	
Process Notes	Recommended	N	

FIELD NAME	REQUIRED; RECOMMENDED; OR NOT REQUIRED	USED FOR QUERIES	NOTES
POLLUTANT LEVEL INFORMATION			
Pollutant Name/Chemical Abstract Service (CAS) Number	Required	Y	Select pollutant name and CAS number from the drop-down list.
Control Method Code	Required	Y	
Control Method Description	Required*	Y	* A control method description is not required when there are no controls (control method code = N)
Number of Control Options Considered	Not Required	N	
Rank of Option Selected	Not Required	N	
Emission Limit 1	Required*	Y	*An emission limit is required for every pollutant entry. Three exceptions are allowed, although it is still recommended that you provide a primary emission limit. The exceptions are: 1) If no control is used, (control method code = N); 2) If a standardized emission limit is listed; or 3) If percent efficiency is substituted as a limit as part of the permit.
Emission Limit 1 Unit	Required	Y	An emission unit is required if a limit has been entered.

FIELD NAME	REQUIRED; RECOMMENDED; OR NOT REQUIRED	USED FOR QUERIES	NOTES
Emission Limit 1 Other Conditions	Not Required	N	Conditions that apply to the limit, such as operating conditions, or averaging period.
Emission Limit 2	Not Required	N	
Emission Limit 2 Unit	Not Required	N	An emission unit is required if a limit has been entered.
Emission Limit 2 Other Conditions	Not Required	N	Conditions that apply to the limit, such as operating conditions, or averaging period.
Standardized Emission Limit	Required*	Y	* For all processes, the emission limit for visible emissions (VE as percent opacity) should be listed in the standardized emission limit field. A standardized emission limit is required for the pollutants listed under the process type codes in Appendix E, *RBLC Standard Emission Units by Process Type Code*. If the process type and pollutant is not listed in Appendix E, an emission limit is not required.
Standardized Emission Limit Unit	Required	Y	An emission unit is required if a limit has been entered.
Standardized Emission Limit Other Conditions	Not Required	N	Conditions that apply to the limit, such as operating conditions, or averaging period.

FIELD NAME	REQUIRED; RECOMMENDED; OR NOT REQUIRED	USED FOR QUERIES	NOTES
Emission Limit Basis	Required	Y	
% Efficiency	Recommended	N	See note on primary emission limits above.
Emission Type	Required	Y	Options are: P (point), A (area), and F (fugitive).
Costs Verified by Agency	Recommended	N	
Capital Cost of Control Equipment	Not Required	N	If this information is CBI, it should **not** be entered.
O/M Cost of Control Equipment	Not Required	N	If this information is CBI, it should **not** be entered.
Year Used in Cost Estimates	Recommended	N	If this information is CBI, it should **not** be entered.
Annualized Cost	Not Required	N	In dollars
Cost Effectiveness	Recommended	N	In dollars per ton
Incremental Cost Effectiveness	Recommended		
Pollutant Notes	Not required	N	

QA/QC Checklist for Data Entry and Editing

For the Entire Determination

- Keep in mind the general goals of a QA review: insuring entry completeness, and accuracy in data entry, coding, naming, and reasonableness.
- Throughout the determination entry, check for typographical errors and misspellings, even in the notes fields. Make sure that the notes are concise, well worded, and informative.
- Check for accuracy in data entry.
- Check all required and recommended data fields. Use Table 5.1 and Appendix A to identify those fields.

Facility Level Input Form

1) Are name, address and location data reasonable and correct? Review entries for UTM coordinates. UTM coordinates are defined as zone, easting and northing (x and y coordinates, respectively). The conterminous 48 States are covered by 10 zones, from Zone 10 on the west coast through Zone 19 in New England. Alaska is covered by zones 10 through 2, and Hawaii by zones 4 and 5.

2) Check NAICS and SIC codes. If you were looking for information about this type of facility, would you search using the code that has been assigned?

3) Is the permit issued date an actual or estimated date? Is the permit issued date after the application received date? Actual start up and compliance dates are especially helpful to users of the data base because those dates indicate that the project is actually operating. These should be entered if they are available.

Process Level Input Form

4) Are all of the processes covered by the determination included? Are the processes defined so that pollutants, controls and limits can be entered in an understandable way for each one?

5) Check the process name. Does it use the standard naming approach for processes described in the data entry instructions in Appendix A, *RBLC Data Submittal Form and Instructions* (e.g., turbine, single cycle, natural gas)?

Figure 5.1: QA/QC Checklist

6) Check the SCC designations. If you were looking for this process, would you search using the code that you assigned?

7) Check the units for throughput. Use Appendix D to check units abbreviations.

8) If throughput is not in terms of fuel, is information provided about the throughput material in the notes?

9) Has compliance information been entered? If compliance has been verified using "other" methods, have these methods been specified under "describe other"?

Pollutant Level Input Form

10) Are all of the pollutants included for each process? In many cases, the permit addresses only one or a few of the pollutants that can be expected to be emitted from a process. If there are pollutants that are not included in the determination for a process, include an explanation in the process notes.

11) Is the Control Method Code properly assigned? Remember that a device added to a process that reduces emissions during the process (e.g., low-NO_x burners) should be defined as pollution prevention, not as an add-on. Pollution prevention encompasses recycling, materials changes and reformulation, and pollution reduction technology that is integral to the process.

12) If the control method code is add on, pollution prevention or both (add on and pollution prevention), there must be a description of the control method in the text field.

13) Check the descriptors for add on control devices and pollution prevention methods. Use the names and abbreviations in Appendix D, *RBLC Process, Unit, and Pollutant Abbreviations* to insure that consistent terms are used throughout the data base.

14) Have emission limits been entered? Limits can be entered as either emissions or as a control's percent efficiency. If the only limit is the percent efficiency, the efficiency should be entered in the field for emission limit 1 and in the percent efficiency field.

15) Are pollutant emission limits, and percent efficiency levels reasonable?

Figure 5.1: QA/QC Checklist, continued.

16) Check units for emission limits 1 and 2. Use Appendix D to check abbreviations for emission units.

17) Emission limits for visible emissions (VE) should be expressed as percent opacity (% opacity). VE emission limits for all processes should be entered in the standardized emission limit field.

18) Check the processes in the determination against the list of processes included in Appendix E, *RBLC Standard Emission Units by Process Type Code*. If a process matches any of those on that list, there should be a standardized emission limit entered for the pollutants listed for that process.

Figure 5.1: QA/QC Checklist, continued.

APPENDIX C
PROCESS TYPE CODE LISTING

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Appendix C -- Process Code Listing

PLEASE NOTE: The RBLC is currently in the process of re-organizing the Process Type Code (PTC) system. To date, the external combustion sources (formerly PTC 11.xxx) have been modified and are reflected in this list. The new codes include 11.xxx, 12.xxx, 13.xxx, and 14.xxx. The archived external combustion PTCs still be found at the end of this Appendix.

RBLC is currently working on the internal combustion (15.xxx) codes.

10.000 FUEL COMBUSTION

11.000 Utility- and Large Industrial-Size Boilers/Furnaces (> 250 MMBtu/h)

11.100 Solid Fuel & Solid Fuel Mixtures
- 11.110 Coal (includes bituminous, subbituminous, anthracite, and lignite)
- 11.120 Biomass (includes wood, wood waste, bagasse, and other biomass)
- 11.130 Other Solid Fuel & Solid Fuel Mixtures

11.200 Liquid Fuel & Liquid Fuel Mixtures
- 11.210 Residual Fuel Oil (ASTM # 4,5,6)
- 11.220 Distillate Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel)
- 11.230 Other Liquid Fuel & Liquid Fuel Mixtures

11.300 Gaseous Fuel & Gaseous Fuel Mixtures
- 11.310 Natural Gas (includes propane and liquefied petroleum gas)
- 11.320 Other Gaseous Fuel & Gaseous Fuel Mixtures

11.900 Other Fuels and Combinations (e.g., solid/liquid, liquid/gas)

12.000 Industrial-Size Boilers/Furnaces (> 100 MMBtu/h & <= 250 MMBtu/h)

12.100 Solid Fuel & Solid Fuel Mixtures
- 12.110 Coal (includes bituminous, subbituminous, anthracite, and lignite)
- 12.120 Biomass (includes wood, wood waste, bagasse, and other biomass)
- 12.130 Other Solid Fuel & Solid Fuel Mixtures

12.200 Liquid Fuel & Liquid Fuel Mixtures
- 12.210 Residual Fuel Oil (ASTM # 4,5,6)
- 12.220 Distillate Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel)
- 12.230 Other Liquid Fuel & Liquid Fuel Mixtures

12.300 Gaseous Fuel & Gaseous Fuel Mixtures

CODE PROCESS TYPE

12.310 Natural Gas (includes propane and liquefied petroleum gas)
12.320 Other Gaseous Fuel & Gaseous Fuel Mixtures
12.900 Other Fuels and Combinations (e.g., solid/liquid, liquid/gas)

13.000 Commercial/Institutional-Size Boilers/Furnaces (<= 100 MMBtu/h)

13.100 Solid Fuel & Solid Fuel Mixtures
13.110 Coal (includes bituminous, subbituminous, anthracite, and lignite)
13.120 Biomass (includes wood, wood waste, bagasse, and other biomass)
13.130 Other Solid Fuel & Solid Fuel Mixtures
13.200 Liquid Fuel & Liquid Fuel Mixtures
13.210 Residual Fuel Oil (ASTM # 4,5,6)
13.220 Distillate Fuel Oil (ASTM # 1,2, includes kerosene, aviation, diesel fuel)
13.230 Other Liquid Fuel & Liquid Fuel Mixtures
13.300 Gaseous Fuel & Gaseous Fuel Mixtures
13.310 Natural Gas (includes propane and liquefied petroleum gas)
13.320 Other Gaseous Fuel & Gaseous Fuel Mixtures
13.900 Other Fuels and Combinations (e.g., solid/liquid, liquid/gas)

14.000 Miscellaneous Heaters and Furnaces (unknown size)

14.100 Solid Fuel & Solid Fuel Mixtures
14.200 Liquid Fuel & Liquid Fuel Mixtures
14.300 Gaseous Fuel & Gaseous Fuel Mixtures
14.900 Other/Unknown Fuels and Combinations (e.g., solid/liquid, liquid/gas)

15.000 Large Combustion Turbines (more than 25 MW)

15.100 Simple Cycle (turbine alone w/out waste heat recovery)
15.110 Natural Gas (includes propane and liquefied petroleum gas)
15.120 Other Gaseous Fuel & Gaseous Fuel Mixtures
15.130 Liquid Fuel & Liquid Fuel Mixtures
15.200 Combined Cycle & Cogeneration
15.210 Natural Gas (includes propane and liquefied petroleum gas)

CODE PROCESS TYPE

15.220 Other Gaseous Fuel & Gaseous Fuel Mixtures
15.230 Liquid Fuel & Liquid Fuel Mixtures
15.900 Other/Unknown Cycle and/or Fuel

16.000 Small Combustion Turbines (25 MW or less)

16.100 Simple Cycle (turbine alone w/out waste heat recovery)
16.110 Natural Gas (includes propane and liquefied petroleum gas)
16.120 Other Gaseous Fuel & Gaseous Fuel Mixtures
16.130 Liquid Fuel & Liquid Fuel Mixtures
16.200 Combined Cycle & Cogeneration
16.210 Natural Gas (includes propane and liquefied petroleum gas)
16.220 Other Gaseous Fuel & Gaseous Fuel Mixtures
16.230 Liquid Fuel & Liquid Fuel Mixtures
16.900 Other/Unknown Cycle and/or Fuel

17.000 Internal Combustion Engines

17.100 Large Internal Combustion Engines (more than 500 horsepower)
17.110 Fuel Oil (ASTM #1,2, includes kerosene, aviation, diesel fuel)
17.120 Other Liquid Fuel & Liquid Fuel Mixtures
17.130 Natural Gas (includes propane and liquified petroleum gas)
17.140 Other Gaseous Fuel & Gaseous Fuel Mixtures
17.150 Other/Unknown Fuel
17.200 Small Internal Combustion Engines (500 horsepower or less)
17.210 Fuel Oil (ASTM #1,2, includes kerosene, aviation, diesel fuel)
17.220 Other Liquid Fuel & Liquid Fuel Mixtures
17.230 Natural Gas (includes propane and liquified petroleum gas)
17.240 Other Gaseous Fuel & Gaseous Fuel Mixtures
17.250 Other/Unknown Fuel

18.000 (reserved)

CODE PROCESS TYPE

19.000 Miscellaneous Combustion
19.100 Misc. Boilers, Furnaces, Heaters
19.200 Misc. Combustion Turbines
19.300 Misc. Internal Combustion Engines
19.900 Other Misc. Combustion

20.000 WASTE DISPOSAL

21.000 MUNICIPAL WASTE

21.001 Municipal Waste Combustors/Incinerators
21.002 Municipal Waste Landfills
21.003 Publicly Owned Treatment Works (POTW) Emissions (except 21.004)
21.004 Sewage Sludge Incineration
21.999 Other Municipal Waste Processing/Disposal Facilities

22.000 HAZARDOUS WASTE

22.007 Asbestos Demolition, Renovation, and Disposal
22.001 Benzene Waste Treatment
22.006 Contaminated Soil Treatment
22.002 Hazardous Waste Incineration
22.003 Hazardous Waste Landfills
22.004 Site Remediation
22.005 Treatment, Storage and Disposal Facilities (TSDF) (except 22.002, 22.003 & 22.006)
22.999 Other Hazardous Waste Processing/Disposal Facilities

29.000 OTHER WASTE DISPOSAL (except 21 & 22)

29.001 Automobile Body Shredding/Incineration
29.002 Industrial Wastewater/Contaminated Water Treatment

29.003 Industrial Landfills
29.004 Medical/Infectious Waste Incineration
29.999 Other Waste Disposal Sources

30.000 WOOD PRODUCTS INDUSTRY

30.001 Charcoal
30.002 Kraft Pulp Mills
30.003 Plywood and Veneer Operations
30.004 Pulp and Paper Production other than Kraft
30.005 Reconstituted Panelboard Plants (waferboard, particleboard, etc.)
30.006 Wood Treatment
30.007 Woodworking
30.999 Other Wood Products Industry Sources

40.000 ORGANIC EVAPORATIVE LOSSES

41.000 SURFACE COATING/PRINTING/GRAPHIC ARTS

41.001 Aerospace Surface Coating
41.002 Automobiles and Trucks Surface Coating (OEM)
41.003 Automotive Refinishing
41.004 Can Surface Coating
41.005 Fabric Coating/Printing/Dyeing (except 41.017)
41.006 Flatwood Paneling Surface Coating
41.007 Flexible Vinyl & Urethane Coating/Printing
41.008 Large Appliance Surface Coating
41.026 Leather Surface Coating
41.009 Magnetic Tape Surface Coating
41.010 Magnetic Wire Surface Coating
41.011 Metal Coil Surface Coating
41.012 Metal Furniture Surface Coating
41.013 Miscellaneous Metal Parts and Products Surface Coating
41.014 Paper, Plastic & Foil Web Surface Coating (except 41.007 & 41.018)

CODE PROCESS TYPE

41.015 Plastic Parts for Business Machines Surface Coating
41.016 Plastic Parts & Products Surface Coating (except 41.015)
41.017 Polymeric Coating of Fabrics
41.018 Pressure Sensitive Tapes and Labels Coating
41.019 Printing - Forms
41.020 Printing - News Print
41.021 Printing - Packaging
41.022 Printing - Publication
41.023 Printing/Publication (except 41.007 & 41.019-022)
41.024 Ship Building & Repair Surface Coating
41.025 Wood Products/Furniture Surface Coating (except 41.006)
41.999 Other Surface Coating/Printing/Graphic Arts Sources

42.000 LIQUID MARKETING (PETROLEUM PRODUCTS, GASOLINE, VOL)

42.001 Gasoline Bulk Plants
42.002 Gasoline Bulk Terminals
42.003 Gasoline Marketing (except 42.001 & 42.002)
42.004 Petroleum Liquid Marketing (except 42.001-003 & 42.005-006)
42.005 Petroleum Liquid Storage in Fixed Roof Tanks
42.006 Petroleum Liquid Storage in Floating Roof Tanks
42.009 Volatile Organic Liquid Storage
42.010 Volatile Organic Liquid Marketing (except 42.009)
42.999 Other Liquid Marketing Sources

49.000 ORGANIC EVAPORATIVE LOSSES (except 41 & 42)

49.001 Aerosol Can Filling
49.012 Architectural & Industrial Maintenance (AIM) Coatings
49.013 Automobile Refinish Coatings
49.011 Consumer Products
49.002 Dry Cleaning - PERC/Chlorinated Solvents
49.003 Dry Cleaning - Petroleum Solvents
49.004 Fiberglass Boat Manufacturing
49.005 Fiberglass/Reinforced Polymer Products Manufacturing (except 49.004)

49.006 Halogenated Solvent Cleaners
49.007 Ink Manufacturing
49.008 Organic Solvent Cleaning & Degreasing (except 49.006)
49.009 Paint/Coating/Adhesives Manufacturing
49.010 Paint Stripping
49.999 Other Organic Evaporative Loss Sources

50.000 PETROLEUM/NATURAL GAS PRODUCTION AND REFINING

50.001 Oil and Gas Field Services
50.002 Natural Gas/Gasoline Processing Plants
50.003 Petroleum Refining Conversion Processes (cracking, CO boilers, reforming, alkylation, polymerization, isomerization, coking)
50.007 Petroleum Refining Equipment Leaks/Fugitive Emissions
50.004 Petroleum Refining Feedstock (blending, loading and unloading)
50.008 Petroleum Refining Flares and Incinerators (except acid gas/sulfur recovery unit incinerators - 50.006)
50.005 Petroleum Refining Separation Processes (distillation and light ends recovery)
50.006 Petroleum Refining Treating Processes (hydrodesulfurization, hydrotreating, chemical sweetening, acid gas removal, deasphalting, sulfur recovery units, acid gas/sulfur recovery unit incinerators)
50.009 Petroleum Refining Wastewater and Wastewater Treatment
50.010 Shale Processing
50.999 Other Petroleum/Natural Gas Production & Refining Sources (except 50.001-010 and 42.000 - Liquid Marketing

60.000 CHEMICALS MANUFACTURING

61.000 AGRICULTURAL CHEMICALS MANUFACTURING

61.001 2,4-D Salts and Esters Production
61.002 4-Chloro-2-Methylphenoxyacetic Acid Production

CODE PROCESS TYPE

61.003 4,6-Dinitro-o-Cresol Production
61.004 Captafol (tm) Production
61.005 Captan (tm) Production
61.006 Chloroneb (tm) Production
61.007 Chlorthalonil (tm) Production
61.008 Dacthal (tm) Production
61.012 Fertilizer Production (except 61.009)
61.009 Phosphate Fertilizers Production
61.010 Sodium Pentachlorophenate Production
61.011 Tordon Acid Production
61.999 Other Agricultural Chemical Manufacturing Sources

62.000 INORGANIC CHEMICALS MANUFACTURING

62.001 Ammonium Sulfate Production - Caprolactam By-Product Plants
62.002 Antimony Oxides Manufacturing
62.003 Chlorine Production
62.016 Chloroalkali Production
62.004 Chromium Chemicals Manufacturing
62.005 Cyanuric Chemicals Manufacturing
62.006 Fume Silica Production
62.007 Hydrochloric Acid Production
62.017 Hydrofluoric Acid Production
62.008 Hydrogen Cyanide Production
62.009 Hydrogen Fluoride Production
62.020 Inorganic Liquid/Gas Storage & Handling
62.014 Nitric Acid Plants
62.010 Phosphoric Acid Manufacturing
62.011 Quaternary Ammonium Compounds Production
62.018 Sodium Carbonate Production
62.012 Sodium Cyanide Production
62.015 Sulfuric Acid Plants
62.019 Sulfur Recovery (except 50.006)
62.013 Uranium Hexafluoride Production
62.999 Other Inorganic Chemical Manufacturing Sources

CODE PROCESS TYPE

63.000 POLYMER AND RESIN PRODUCTION

63.001 Acetal Resins Production
63.002 Acrylonitrile-Butadiene-Styrene Production
63.003 Alkyd Resins Production
63.004 Amino Resins Production
63.005 Butadiene-Furfural Cotrimer (R-11)
63.006 Butyl Rubber Production
63.007 Carboxymethylcellulose Production
63.008 Cellophane Production
63.009 Cellulose Ethers Production
63.010 Epichlorohydrin Elastomers Production
63.011 Epoxy Resins Production
63.012 Ethylene-propylene Rubber Production
63.013 Flexible Polyurethane Foam Production
63.014 Hypalon (tm) Production
63.015 Maleic Copolymers Production
63.016 Methylcellulose Production
63.017 Methyl Methacrylate-Acrylonitrile-Butadiene-Styrene Production
63.018 Methyl Methacrylate-Butadiene-Styrene Terpolymers Production
63.019 Neoprene Production
63.020 Nitrile Butadiene Rubber Production
63.021 Non-Nylon Polyamides Production
63.022 Nylon 6 Production
63.023 Phenolic Resins Production
63.024 Polybutadiene Rubber Production
63.025 Polycarbonates Production
63.026 Polyester Resins Production
63.027 Polyether Polyols Production
63.028 Polyethylene Terephthalate Production
63.029 Polymerized Vinylidene Production
63.030 Polymethyl Methacrylate Resins Production
63.031 Polystyrene Production
63.032 Polysulfide Rubber Production
63.033 Polyvinyl Acetate Emulsions Production
63.034 Polyvinyl Alcohol Production
63.035 Polyvinyl Butyral Production

63.036 Polyvinyl Chloride and Copolymers Production
63.037 Reinforced Plastic Composites Production
63.038 Styrene-Acrylonitrile Production
63.039 Styrene Butadiene Rubber and Latex Production
63.999 Other Polymer and Resin Manufacturing Sources

64.000 SYNTHETIC ORGANIC CHEMICAL MANUFACTURING INDUSTRY (SOCMI)

64.001 Batch Reaction Vessels (except 69.011)
64.002 Equipment Leaks (valves, compressors, pumps, etc.)
64.003 Processes Vents (emissions from air oxidation, distillation, and other reaction vessels)
64.004 Storage Tanks (SOCMI Chemicals (loading/unloading, filling, etc.)
64.005 Transfer of SOCMI Chemicals (loading/unloading, filling, etc.)
64.006 Wastewater Collection & Treatment
64.999 Other SOCMI Industry Sources

65.000 SYNTHETIC FIBERS PRODUCTION

65.001 Acrylic Fibers/Modacrylic Fibers Production
65.002 Rayon Production
65.003 Spandex Production
65.999 Other Synthetic Fibers Production Sources

69.000 CHEMICAL MANUFACTURING (except 61, 62, 63, 64 & 65)

69.001 Benzyltrimethylammonium Chloride Facilities
69.002 Butadiene Dimers Production
69.015 Carbon Black Manufacturing
69.003 Carbonyl Sulfide Production
69.004 Chelating Agents Production
69.005 Chlorinated Paraffins Production
69.006 Dodecanedioic Acid Production
69.007 Ethylidene Norbornene Production
69.008 Explosives Production

69.009 Hydrazine Production
69.010 OBPA/1,3-Diisocyanate Production
69.011 Pharmaceuticals Production
69.012 Photographic Chemicals Production
69.013 Phthalate Plasticizers Production
69.017 Propellant Manufacturing & Production
69.014 Rubber Chemicals Manufacturing
69.016 Soap & Detergent Manufacturing
69.999 Other Chemical Manufacturing Sources

70.000 FOOD AND AGRICULTURAL PRODUCTS (also see 61 - AGRICULTURAL CHEMICALS)

70.016 Alcohol Fuel Production
70.008 Alcoholic Beverages Production
70.001 Alfalfa Dehydrating
70.002 Baker's Yeast Manufacturing
70.003 Bread Bakeries
70.004 Cellulose Food Casing Manufacturing
70.005 Coffee Roasting
70.006 Cotton Ginning
70.007 Feed and Grain Handling, Storage & Processing (including Mills and Elevators)
70.009 Fish Processing
70.010 Fruit and Vegetable Processing
70.011 Meat Smokehouses
70.012 Roasting (except 70.005)
70.013 Starch Manufacturing
70.014 Sugar Cane Processing
70.015 Vegetable Oil Production
70.999 Other Food and Agricultural Products Sources

80.000 METALLURGICAL INDUSTRY

81.000 FERROUS METALS INDUSTRY

81.001 Coke By-product Plants
81.002 Coke Production (except 81.001)
81.003 Ferroalloy Production
81.004 Iron Foundries
81.005 Stainless Steel/Specialty Steel Manufacturing
81.006 Steel Foundries
81.007 Steel Manufacturing (except 81.005 & 81.006)
81.008 Steel Pickling - HCL Process
81.999 Other Ferrous Metals Industry Sources

82.000 NONFERROUS METALS INDUSTRY

82.016 Beryllium Processing and Manufacturing
82.001 Lead Acid Battery Manufacturing
82.002 Lead Acid Battery Reclamation
82.003 Lead Oxide and Pigment Production
82.004 Lead Products (except 82.001-002, 82.006 & 82.012)
82.005 Primary Aluminum Production
82.006 Primary Copper Smelting
82.007 Primary Lead Smelting
82.008 Primary Magnesium Refining
82.009 Primary Zinc Smelting
82.010 Secondary Aluminum Production
82.011 Secondary Brass & Brass Ingot Production
82.012 Secondary Copper Smelting & Alloying
82.013 Secondary Lead Smelting
82.014 Secondary Magnesium Smelting
82.015 Secondary Zinc Processing
82.999 Other Non-Ferrous Metals Industry Sources

90.000 MINERAL PRODUCTS

90.001 Alumina Processing
90.035 Asbestos Manufacturing
90.002 Asphalt/Coal Tar Application - Metal Pipes

CODE PROCESS TYPE

90.003 Asphalt Concrete Manufacturing
90.004 Asphalt Processing (except 90.002, 90.003 & 90.034)
90.034 Asphalt Roofing Products Manufacturing
90.017 Calciners & Dryers and Mineral Processing Facilities
90.005 Calcium Carbide Manufacturing
90.006 Cement Manufacturing (except 90.028)
90.007 Chromium Refractories Production
90.008 Clay and Fly Ash Sintering
90.009 Clay Products (including Bricks & Ceramics)
90.010 Coal Conversion/Gasification
90.011 Coal Handling/Processing/Preparation/Cleaning
90.012 Concrete Batch Plants
90.013 Elemental Phosphorous Plants
90.014 Frit Manufacturing
90.015 Glass Fiber Manufacturing (except 90.033)
90.016 Glass Manufacturing
90.017 Calciners
90.018 Lead Ore Crushing and Grinding
90.019 Lime/Limestone Handling/Kilns/Storage/Manufacturing
90.020 Mercury Ore Processing
90.021 Metallic Mineral/Ore Processing (except 90.018, 90.020 & 90.031)
90.022 Mineral Wool Manufacturing
90.023 Mining Operations (except 90.032)
90.024 Non-metallic Mineral Processing (except 90.011, 90.019, 90.017, 90.026) (NOTE: This category includes stone quarrying, sand and gravel processing, gypsum processing, perlite processing and all other non-metallic mineral/ore processing.)
90.026 Phosphate Rock Processing
90.027 Phosphogypsum Stacks
90.028 Portland Cement Manufacturing
90.029 Refractories
90.031 Taconite Iron Ore Processing
90.032 Underground Uranium Mines
90.033 Wool Fiberglass Manufacturing
90.999 Other Mineral Processing Sources

CODE PROCESS TYPE

99.000 MISCELLANEOUS SOURCES

99.001 Abrasive Blasting
99.002 Chromic Acid Anodizing
99.003 Comfort Cooling Towers
99.004 Commercial Sterilization Facilities
99.005 Decorative Chromium Electroplating
99.006 Electronics Manufacturing (except 99.011)
99.013 Electroplating/Plating (except Chrome - 99.002, 99.005 & 99.007)
99.019 Geothermal Power
99.007 Hard Chromium Electroplating
99.008 Hospital Sterilization Facilities
99.009 Industrial Process Cooling Towers
99.017 Leather Tanning
99.014 Polystyrene Foam Products Manufacturing
99.016 Polyurethane Foam Products Manufacturing
99.020 Rocket Demilitarization
99.010 Rocket Engine Test Firing
99.015 Rubber Tire Manufacturing and Retreading
99.011 Semiconductor Manufacturing
99.018 Synthetic Fuels Production (except 70.016 & 90.010)
99.012 Welding & Grinding
99.999 Other Miscellaneous Sources

ARCHIVED CODES:

11.000 EXTERNAL COMBUSTION

11.001 Bagasses Combustion
11.002 Coal Combustion
11.006 Fuel Oil Combustion
11.003 Lignite Combustion
11.004 Multiple Fuels Combustion
11.005 Natural Gas Combustion
11.007 Waste Oil Combustion
11.008 Wood/Wood Waste Combustion
11.999 Other External Combustion Sources

CODE	PROCESS TYPE

15.000 INTERNAL COMBUSTION

15.001 Aviation Fuels
15.002 Diesel Fuel
15.006 Fuel Oil
15.003 Gasoline
15.007 Multiple Fuels
15.004 Natural Gas
15.005 Process Gas
15.999 Other Internal Combustion Sources

APPENDIX D
ABBREVIATIONS FOR PROCESSES, UNITS, AND POLLUTANTS

This page has been intentionally left blank.

Appendix D -- Abbreviations for Processes, Units, and Pollutants

Abbreviations for Processes and Descriptors

Abbreviation	Process or Descriptor
ADD	additive
AL	aluminum
AM	American
ASSOC	association
ATMOS	atmospheric
CALC	catalytic
CEM	continuous emission monitoring
CO	company
COLL	collection
COOP	cooperative
CORP	corporation
DECARB	decarbonization
DESULF	desulfurization
DISTIL	distillation
DISTN	distribution
DIV	division
E	eastern
EA	each
EFF	efficiency
ELECT	electric
EMISS	emissions
ENVIRON OR ENV	environmental
ESP	electrostatic precipitator
FAC	facility
FCC	fluid catalytic cracking
FCCU	fluid catalytic cracking unit
FGR	flue gas recirculation
FURN	furnace
GEN	generator
HAND	handling
HRSG	heat recovery steam generator
HVLP	high-volume, low pressure (spray guns)
I.C.	internal combustion
INCIN	incinerator
INDEP	independent
INTERNAT	international
LAB	laboratory
LDOUT	loadout

Abbreviation	Process or Descriptor
LIQ	liquid
LT	light
MATL	material
MFG	manufacturing
MISC	miscellaneous
MODIF	modification
NAT	natural
NATL	national
POLL	pollutant/pollution
PREP	preparation
PROD	production
PWR	power
REC	recovery
RECIP	reciprocating
RECLAM	reclamation
REFIG	refrigeration
REFIN	refinery
REG	regular
REGEN	regenerator
RESID	residual
ROT	rotary
SCR	selective catalytic reduction
SCRUB	scrubber
SECOND	secondary
SHIP	shipping
SNCR	selective non-catalytic reduction
SOLN	solution
STOR	storage
SUP	supplementary
SYS	system
TRANS	transmission
UNIV	university
VAC	vacuum
VERT	vertical

Abbreviations for Emission Limit Units

Abbreviation	Emission Limit Unit
ACF	actual cubic feet
ACFM	actual cubic feet per minute
ACS	applied coating solids
ADP	air dried pulp
ADTP	air dried tons product
ADTFP	air dried tons of final product
ADTUBP	air dried tons of unbleached pulp
ADUP	air dried unbleached pulp
AMP-H	ampere hours
AV	average
BBL	barrels
BF	board feet
BHP	brake horsepower
BLS	black liquor solids
BPSD	barrels per stream day
BTU	British thermal units
CF	cubic feet
CFM	cubic feet per minute
CUYD	cubic yard
D	day
DFEED	dry feed
DACF	dry actual cubic feet
DIST	distillate
DSCF	dry standard cubic feet
F	feet
G	gram
G/B-HP-H	grams per brake horsepower-hour
G/HP-H	grams per horsepower-hour
G/O	gas/oil
GAL	gallon
GAL/M	gallons per minute
GIGA	giga- *(10^9 prefix)*
GR	grains
H	hour
HP	horsepower
J	joule
KG	kilogram
KW	kilowatt
L	liter
LB	pound
LT	long ton

Abbreviation	Emission Limit Unit
M	thousand (10^3)
MI	miles
MIN	minute
MG/L	milligram per liter
MM	million (10^6)
MO	month
MW	megawatt
UG	microgram (10^{-6})
N	natural
NG	nanogram (10^{-9})
OPAC	opacity
PPM	parts per million
PPH	parts per hundred
%	percent
% BY VOL	% by volume
% BY WT	% by weight
RDF	refuse derived fuel
RESID	residual
SB	subbituminous
SCF	standard cubic feet
SCFD	standard cubic feet per day
SCFH	standard cubic feet per hour
SCFM	standard cubic feet per minute
SEC	second
SQF	square feet
T	ton
T/D	tons per day
T/H	tons per hour
T/YR	tons per year
TONNE	metric tonne
VOL	volume
WKS	weeks
YD	yard
YR	year

Abbreviations for Pollutants

Abbreviation	Pollutant
AG	silver
AN	acrylonitrile
AR	argon
AS	arsenic
BA	barium
BAP	benzo(a)pyrene
BE	beryllium
CA	calcium
CD	cadmium
CDD	chlorodibenzodioxins
CDF	chlorodibenzofurans
CL	chlorine
CL2	chlorine (gas)
CL2/OCL	chlorine and oxychlorine
CLO2	chlorine dioxide
CO	carbon monoxide
CO2	carbon dioxide
COS	carbonyl sulfide
CR	chromium
CRVI	hexavalent chrome
CS	cesium
CU	copper
DCB	1,4-dichloro-2-butene
ETH	ethylene
ETO	ethylene oxide
F	fluorine
TF	fluorides, total
FSP	fine suspended particulates
HBR	hydrogen bromide
HC	hydrocarbons
HCL	hydrochloric acid
HCN	hydrogen cyanide
HDM	hexamethylene diisocyanate monomer
HF	hydrogen fluoride
HG	mercury
HHD	homopolymer of HDM (see above)
H2O	water
H2S	hydrogen sulfide
H2SO4	sulfuric acid
H2SO4 mist	sulfuric acid mist (also referred to as SAM)
MA	maleic anhydride

Abbreviation	Pollutant
MC ACETATE	methyl cellusolve acetate
MEK	methyl ethyl ketone
MG	magnesium
MI KETONE	methyl isobutyl ketone
MMH	methyl hydrazine
MN	manganese
MO	molybdenum
NAOH	sodium hydroxide
NA2SO4	salt cake
NH3	ammonia
NH4	ammonium
NH4CL	ammonium chloride
NI	nickel
NMHC	nonmethane hydrocarbons
NMOC	nonmethane organic carbon
NOX	nitrogen oxide
NO2	nitrogen dioxide
N2O	nitrous oxide
PAH	polynuclear aromatic hydrocarbons
PB	lead
PCB	polychlorinated biphenyls
PCDF	polychlorinated dibenzo furans
PCNB	pentochloronitrobenzene herbicide
PM, PM10	particulate matter
POCL3	phosphorous oxychloride
POHC	principle organic hazardous constituents
RHC	reactive hydrocarbons
ROC	reactive organic compounds
ROG	reactive organic gases
RSC	reduced sulfur compounds
S	sulfur
SB	antimony
SE	selenium
SN	tin
SO2	sulfur dioxide
SO3	sulfur trioxide
TCDD	2,3,7,8-tetrachlorodibenzo-P-dioxin
TCDF	tetrachlorodibenzo furan
TCE	trichloroethylene
TC-ETHANE	1,1,1-trichloroethane
TF	Total Fluorides
TICL4	titanium tetrachloride
TMT	tetramethyl tin

Abbreviation	Pollutant
TRS	total reduced sulfur
U	uranium
UF4	uranium tetrafluoride
V	vanadium
VC	vinyl chloride
VCM	vinyl chloride monomer
VE	visible emissions
VOC	volatile organic compounds
ZN	zinc
ZRSO4	zirconium sulfate

Pollutant Name and CAS Number

See also the previous table, Abbreviations for Pollutants

POLLUTANT	ALTERNATE NAME	CAS NUMBER
1,1,1 TRICHLOROETHANE		71-55-6
2,3,7,8 TCDD	2,3,7,8-tetrachlorodibenzo-P-dioxin	1746-01-6
2-BUTANONE		78-93-3
ACETONE		67-64-1
ACRYLAMIDE		79-06-1
ACRYLAMIDE MONOMER		79-06-1
ACRYLIC ACID		79-10-7
ACRYLONITRILE		107-13-1
AG	Silver	7440-22-4
ALUMINUM OXIDE		1344-28-1
AMMONIA		7664-41-7
AN	Acrylonitrile	107-13-1
AR	Argon	13994-71-3
ARGON		13994-71-3
AS	Arsenic	7440-38-2
ASBESTOS		1332-21-4
BA	Barium	7440-39-3
BAP	Benzo(a)pyrene	50-32-8
BE	Beryllium	7440-41-7
BENZENE		71-43-2
BENZO-A-PYRENE		50-32-8
BENZOTRICHLORIDE		98-07-7
BENZYL CHLORIDE		100-44-7
BR	Bromine	7726-95-6
BUTYL ACETATE		123-86-4
BZ	Benzene	71-43-2
CA	Calcium	7440-70-2
CALCIUM HYDROXIDE		1035-62-0
CAPROLACTAM		105-60-2
CARBON BLACK		1333-86-4
CARBON TETRACHLORIDE		56-23-5
CCL2F2	Dichlorodifluoromethane	75-71-8
CD	Cadmium	7440-43-9
CHCL3	Chloroform	67-66-3
CHLORINE		7782-50-5
CHLORINE DIOXIDE		10049-04-4

CHLOROFORM		67-66-3
CHROME	Chromium	7440-47-3
CHROMIC ACID		1333-82-0
CL	Chlorine	7782-50-5
CL2	Chlorine (gas)	10049-04-4
CO	Carbon Monoxide	630-08-0
CO2	Carbon Dioxide	124-38-9
COBALT		7440-48-4
CR	Chromium	7440-47-3
CRO3	Chromium Trioxide	1333-82-0
CS	Cesium	7440-46-2
CU	Copper	7440-50-8
DCB	1,4-dichloro-2-butene	764-41-0
DCB		25321-22-6
DIBUTYL PHTHALATE		84-72-2
DIISOBUTYL KETONE		108-83-8
DIMETHYL ACETAMIDE		127-19-5
DIMETHYL FORMAMIDE		68-12-2
DIOXINS		SEQ. 128
ETHYL ACETATE		141-78-6
ETHYL ALCOHOL		64-17-5
ETHYL BENZENE		100-41-4
ETHYLBENZENE		100-41-4
ETHYLENE GLYCOL		107-21-1
ETHYLENE OXIDE		75-21-8
ETO	Ethylene Oxide	75-21-8
F	Fluorine	7782-41-4
FLUORIDE		16984-48-8
FLUORIDES		16984-48-8
FORMALDEHYDE		50-00-0
FREON 12		75-71-8
GRAPHITE		7782-42-5
H2O	Water	7732-18-5
H2S	Hydrogen Sulfide	7783-06-4
H2SO4	Sulfuric Acid	7664-93-9
H2SO4 MIST		7664-93-9
H2SO4 VAPORS		7664-93-9
HBR	Hydrogen Bromide	10035-10-6
HC		SEQ. 11
HCL	Hydrochloric Acid	7647-01-0
HCN	Hydrogen Cyanide	7490-8

HEPTANE		142-82-5
HF	Hydrogen Fluoride	7664-39-3
HG	Mercury	7439-97-6
HYDRAZINE		302-01-2
HYDROGEN PEROXIDE		7722-84-1
ISOOCTYL ALCOHOL		52738-99-5
ISOPROPYL ACETATE		94-11-1
ISOPROPYL ALCOHOL		67-63-0
MAGNESIUM		7439-95-4
MALEIC ANHYDRIDE		108-31-6
MEK	Methyl Ethyl Ketone	78-93-3
MEK-PEROXIDE	Methyl Ethyl Ketone Peroxide	1338-23-4
METHACRYLIC ACID		79-41-4
METHANE		74-82-8
METHANOL		67-56-1
METHYL AMYL KETONE		110-43-0
METHYL BROMIDE		74-83-9
METHYL ETHYL KETONE		78-93-3
METHYL ISOBUTYL KETONE		108-10-1
METHYLENE CHORIDE		75-09-2
MG	Magnesium	7439-95-4
MINERAL SPIRITS		64475-85-0
MMH	Methyl Hydrazine	60-34-4
MN	Manganese	7439-96-5
MO	Molybdenum	7439-98-7
N-BUTYL ACETATE		123-86-4
N-BUTYL ALCOHOL		71-36-3
N-PROPYL ACETATE		109-60-4
N2O	Nitrous Oxide	10024-97-2
NAOH	Sodium Hydroxide	1310-73-2
NAPHTHALENE		91-20-3
NH3	Ammonia	7664-41-7
NH4	Ammonium	14798-03-9
NH4CL	Ammonium Chloride	12125-02-5
NI	Nickel	7440-02-0
NICKEL		7440-02-0
NITRIC ACID		7697-37-2
NO2	Nitrogen Dioxide	10102-44-0
P-TOLUIDINE		106-49-0
PAH	Polynuclear Aromatic Hydrocarbons	SEQ. 6
PB	Lead	7439-92-1

PCB	Polychlorinated Biphenyls	1336-36-3
PERCHLOROETHYLENE		127-18-4
PHENOL		108-95-2
PHOSPHORIC ACID		7664-38-2
PHOSPHOROUS		7723-14-0
POCL3	Phosphorous Oxychloride	10025-87-3
POTASSIUM HYDROXIDE		1310-58-3
PROPYLENE OXIDE		75-56-9
S	Sulfur	7704-34-9
SB	Antimony	7440-36-0
SE	Selenium	7782-49-2
SILVER		7440-22-4
SN	Tin	7440-31-5
SO2	Sulfur Dioxide	7446-09-5
SO3	Sulfur Trioxide	7446-11-9
SODIUM BICHROMATE		10588-01-9
STRONTIUM CHROMATE		7789-06-2
STYRENE		100-42-5
SULFATES		14808-79-8
SULFURIC ACID		7664-93-9
SULFURIC ACID MIST		7664-93-9
TCDD	2,3,7,8-tetrachlorodibenzo-P-dioxin	1746-01-6
TICL4	Titanium Tetrachloride	7550-45-0
TITANIUM DIOXIDE		13463-67-7
TL	Thallium	7440-28-0
TOLUENE		108-88-3
TRICHLOROETHYLENE		79-01-6
TRIETHYLAMINE		121-44-8
U	Uranium	7440-61-1
UF4	Uranium Tetrafluoride	10049-14-6
URANIUM		7440-61-1
V	Vanadium	7440-62-2
XYLENE		1330-20-7
XYLENES		1330-20-7
ZINC		7440-66-6
ZINC CHROMATE		13530-65-9
ZN	Zinc	7440-66-6

Basis for Limit

BACT-PSD	Prevention of Significant Deterioration
BACT-Other	Other (i.e., T-BACT, Toxics-BACT, etc)
LAER	Lowest Available Control Technology
MACT	Maximum Achievable Control Technology
RACT	Reasonably Available Control Technology
GACT	Generally Available Control Technology
NSPS	New Source Performance Standards
NESHAPS	National Emission Standards for Hazardous Air Pollutants
OTHER	Other Control Technology Standards

Emission Type

Point, Fugitive, or Area Source

APPENDIX E
RBLC STANDARD EMISSION UNITS BY PROCESS TYPE CODE

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Appendix E --RBLC Standard Emission Units by Process Type Code

Standard emission units have been established for the processes listed below. These units are required for reporting standardized emission limits in the RBLC data base for these processes. Standardization of emission units facilitates ranking of emission control requirements on a pollutant specific basis. For visible emissions (VE), percent (%) opacity has been established as the standardized unit for all processes

Clearinghouse Process Code	**/ Name or Description**	**Pollutant**	**Required Emission Units**
ALL	All Processes with Emission Limits for Visible Emissions	Visible Emissions	% Opacity
11.001 - 11.999	Electric Utility Steam Generators, Fossil Fuel-fired Steam Generators, Boilers, Furnaces, & Process Heaters	PM, PM10, PM2.5, SOx, NOx, CO	LB/MMBTU
15.001 - 15.999	I. C. Engines	NOx, CO	G/B-HP-H
	Stationary Gas Turbines	NOx, CO	PPM @ 15% O_2
21.001	Municipal Waste Incinerators	PM, PM10, PM2.5 & Metals (CD, PB, HG) SO2, HCL, CO, & NOx	GR/DSCF @ 7% O_2 PPM @ 7% O_2
21.004	Sewage Sludge Incineration	PM, PM10 & PM2.5	LB/T of dry sludge input
30.002	Kraft Pulp Mills - Recovery Furnace	PM, PM10 & PM2.5	GR/DSCF @ 8% O_2
	Kraft Pulp Mills - Lime Kiln	PM, PM10 & PM2.5	GR/DSCF @ 10% O_2

Clearinghouse Process Code	/ Name or Description	Pollutant	Required Emission Units
	Kraft Pulp Mills - Smelt Dissolving Tanks	PM, PM10 & PM2.5	LB/T BLS
	Kraft Pulp Mills - Digesters, Brown Stock Washers, Evaporators, Oxidation, & Stripping System	TRS	PPMV @ 10% O_2
41.002	Auto & Light Truck Surface Coating	VOC	LB/GAL ACS
41.004	Can Surface Coating	VOC	LB/GAL ACS
41.007	Flexible Vinyl & Urethane Coating and Printing	VOC	LB/LB ink solids
41.008	Large Appliance Surface Coating	VOC	LB/GAL ACS
41.011	Metal Coil Surface Coating	VOC	LB/GAL ACS
41.012	Metal Furniture Surface Coating	VOC	LB/GAL ACS
41.015	Plastic Parts for Business Machines Surface Coating	VOC	LB/GAL ACS
41.018	Pressure Sensitive Tape & Label Surface Coating	VOC	LB/LB ACS
50.003	Petroleum Refining - Cracking	PM, PM10 & PM2.5, SOx CO	LB/1000 LB PPMV
50.006	Petroleum Refining - Claus Sulfur Recovery Units	SOx, TRS, H_2S	PPMV @ 0% Excess Air
61.009	Phosphate Fertilizers Production	Total Fluoride	LB/T
62.001	Ammonium Sulfate Production	PM, PM10 & PM2.5	LB/T ammonium sulfate pdtn.
62.014	Nitric Acid Plants	NOX	LB/T of Acid Produced (100% acid)
62.015	Sulfuric Acid Plants	SO_2 & Acid Mist	LB/T
65.001 - 65.999	Synthetic Fibers Production	VOC	LB/1000 LB solvent feed

Clearinghouse Process Code	/ Name or Description	Pollutant	Required Emission Units
70.007	Grain Elevators	PM, PM10 & PM2.5	GR/DSCF
81.003	Ferroalloy Production	PM, PM10 & PM2.5	LB/MW-H
		CO	% (volume basis)
81.004	Iron Foundries	PM, PM10 & PM2.5	GR/DSCF
81.005 - 81.007	Electric Arc Furnaces (EAF) & Argon-Oxygen Decarburlization (AOD) Furnaces at Stainless/Specialty Steel Plants Steel Foundries, & Steel Manufacturing plants	PM, PM10 & PM2.5	GR/DSCF
82.001	Lead Acid Battery Mfg. All Lead Emitting Operations	Pb (Lead)	GR/DSCF
82.005	Primary Aluminum Production	Total Fluorides	LB/T
82.006	Primary Copper Smelters	PM, PM10 & PM2.5	GR/DSCF
82.007	Primary Lead Smelting	PM, PM10 & PM2.5	GR/DSCF
82.009	Primary Zinc Smelting	PM, PM10 & PM2.5	GR/DSCF
82.011	Secondary Brass & Brass Ingot Production	PM, PM10 & PM2.5	GR/DSCF
82.013	Secondary Lead Smelting	PM, PM10 & PM2.5	GR/DSCF
90.004	Hot-Mix Asphalt Processing	PM, PM10 & PM2.5	GR/DSCF
90.011	Coal Handling/Processing/ Preparation/Cleaning	PM, PM10 & PM2.5	GR/DSCF
90.016	Glass Manufacturing Furnace	PM, PM10 & PM2.5	LB/T
90.019	Lime/Limestone Handling/Kilns/ Storage/Manufacturing.	PM, PM10 & PM2.5	LB/T
90.021	Metallic Mineral/Ore Processing	PM, PM10 & PM2.5	GR/DSCF

Clearinghouse Process Code	/ Name or Description	Pollutant	Required Emission Units
90.024	Non-metallic Mineral Processing	PM, PM10 & PM2.5	GR/DSCF
90.026	Phosphate Rock Processing	PM, PM10 & PM2.5	LB/T
90.028	Portland Cement Plants - kiln, in-line raw mill and kiln, clinker cooler	PM, PM10 & PM2.5	LB/T
90.033	Wool Fiberglass Manufacturing	PM, PM10 & PM2.5	LB/T glass pulled
90.034	Asphalt Roofing Products Manufacturing	PM, PM10 & PM2.5	LB/1000 LB
99.015	Rubber Tire Manufacturing Industry - Tread End Cementing, Water-Based Inside Green Tire Spray, & Water-Based Outside Green Tire Spray	VOC	G/TIRE/MO
	Bead Cementing	VOC	G/Bead/MO
	Organic Green Tire Spray, Michelin A Operations, Michelin B Operations Michelin C Operations, Sidewall Cementing, & Undertread Cementing	VOC	% Reduction